BACKGROUND

Shigellae are Gram-negative, non-spore-forming, facultatively anaerobic, non-motile bacteria. *Shigella dysenteriae* is a species of the rod-shaped bacterial genus *Shigella*. This microbe is a normal inhabitant of the human gastrointestinal tract and can cause shigellosis (bacillary dysentery). This is the most severe dysentery mainly because of its potent and deadly Shiga toxin. Shiga toxins work by inhibiting protein synthesis in the host cells. After entering a cell, the Shiga toxin acts as an N-glycosidase, cleaving several nucleobases from the RNA that comprises the ribosome, thereby halting protein synthesis. The toxin has two subunits: A, which is internalized and cleaved into two parts, one of which binds to the ribosome, disrupting protein synthesis; and B, a pentamer that binds to specific glycolipids on the host cell, specifically globotriaosylceramide. *Shigella dysenteriae* is spread through contaminated water and food.

REFERENCES


SOURCE

*Shigella dysenteriae* (0911) is a mouse monoclonal antibody raised against whole cells of ATCC strain 13313.